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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,885	08/26/2005	Tatsuo Hoshino	K21422USWO C038435/018565	1734
7590 Stephen M Haracz Bryan Cave 1290 Avenue of the Americas New York, NY 10104-3300			EXAMINER LILLING, HERBERT J	
			ART UNIT 1657	PAPER NUMBER
			MAIL DATE 06/26/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/528,885	Applicant(s) HOSHINO ET AL.	
	Examiner HERBERT J. LILLING	Art Unit 1657	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. Receipt is acknowledged of an amendment filed June 11, 2008.
2. Claims 1-8 are pending in this application.
3. The prior rejection under 35 USC 103 has been withdrawn.

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-10 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims of U.S. Patent No. 7,341,854 in view of U.S. 6,242,233.

U.S. Patent No. 7,341,854 claims the following:

1. A process for the production of vitamin C from... L-sorbose ... comprising the steps of: (a) cultivating a microorganism in an aqueous nutrient-medium ... L-sorbose ... at a pH in the range of about 4.0 to about 9.0 and in a temperature range from about 13.degree. C. to about 36.degree. C. ...microorganism is selected from the group consisting of *Gluconobacter oxydans* DSM 4025 (FERM BP-

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3812),...and (b) isolating and purifying the microbial produced vitamin C directly from the fermentation medium.

5. The process according to claim 1, wherein the process is carried out at a pH in the range of about 5.0 to about 8.0 and at a temperature range from about 18.degree. to about 33.degree. C. for 1 to 3 days.

—

The reference teaches the direct synthesis of vitamin C from L-sorbose employing the same strain containing the enzyme of instant claim 1.

U.S. Patent No 6,242,233 discloses the following:

A purified aldehyde dehydrogenase, wherein the dehydrogenase has a molecular weight of 150,000.+-.6,000 Da and comprises two homologous subunits or has a molecular weight of 230,000.+-.9,000 Da and comprises three homologous subunits, each subunit having a molecular weight of about 75,000.+-.3,000 Da, wherein the aldehyde dehydrogenase is obtained from a microorganism belonging to the genus *Gluconobacter*;
has L-sorbose,activity;
utilizes as cofactors pyrroloquinoline quinone and heme c;
has an optimum pH of from 7.0 to 8.5; and
is inhibited by Co.sup.2+, Cu.sup.2+, Fe.sup.2+, Ni.sup.2+, Zn.sup.2+, monoiodoacetate and ethylenediamine tetraacetic acid.

The aldehyde dehydrogenase, wherein the microorganism is *Gluconobacter oxydans* having all of the identifying characteristics of *Gluconobacter oxydans* DSM No. 4025.

In light of the Supreme Court's recent decision in *KSR International Co. v. Teleflex Inc (TFX)*., 82 USPQ2d 1385 (2007), whereby there is no requirement that patent examiners use the TSM of *Graham v. Deere et al* approach in order to make a proper obviousness rejection even if the TSM approach cannot be applied to a claimed invention, that invention may still be found obvious.

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One would reasonably expect that the substitution of the enzyme of U.S. Patent No 6,242,233 for the microorganism of U.S. Patent 7,341,854 which enzyme was obtained from the same microorganism of U.S. Patent 7,341,854 would yield Vitamin C in view of the same process conditions are employed for the direct synthesis from L-sorbose.

5. **No claim is allowed.**

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Lilling whose telephone number is 571-272-0918 and Fax Number is **571-273-8300**. or SPE Jon Weber whose telephone number is 571-272-0925. Examiner can be reached Monday-Friday from about 7:30 A.M. to about 7:00 P.M. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

H.J.Lilling: HJL
(571) 272-0918
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June 21, 2008

/HERBERT J LILLING/
Primary Examiner, Art Unit 1657